South Carolina Department of Health and Environmental Control
Division of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

# June 12, 2015 Permit Application Public Notice

### Cynthia Hernandez, OCRM-15-175-B

The Department has received an application for a permit for the alteration of a critical area. The application was submitted pursuant to the Coastal Zone Management Act (Act 123) of 1977 South Carolina General Assembly. The application in brief, is described as follows:

LOCATION:

On and adjacent to Hobcaw Creek at 338 Coinbow Drive, Mount Pleasant, Charleston County, South Carolina.

TMS: 514-03-00-050, 057.

WORK:

The work as proposed consists of reconstruction of an existing dam and erosion control. Specifically, the applicant seeks to reconstruct components of the existing dam as shown and described in the notice attachment. The applicant also seeks to install riprap in areas for proposed scour protection and along the inside of Hobcaw Lake to protect the waterline and trees from further erosion. The work as described is for restoration to an existing dam and erosion control.

This public notice is being distributed to all known interested persons and agencies to assist in developing facts on which a decision by the Department can be based. Comments concerning the proposed work must be submitted in writing, setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

Comments regarding this application must be received by the Department on or before <u>July 12, 2015</u>. For more information, please contact: Steve Brooks at 843-953-0235 or via email at brookss@dhec.sc.gov.

NOTE: Plans depicting the proposed work are available and will be provided upon receipt of a written request or may be viewed on the Department website at <a href="http://www.scdhec.gov/Apps/Environment/PublicNotices">http://www.scdhec.gov/Apps/Environment/PublicNotices</a>.

#### **Project Description**

#### Background

Cynthia Hernandez is proposing to reconstruct the existing dam on Hobcaw Lake in Mount Pleasant, South Carolina. The existing dam that had been constructed on portions of an abandoned drydock (circa 1950s) began to leak and exhibit signs of imminent failure in June 2011. The timber flashboard riser members were removed to relieve pressure on the structure, prevent the water from enlarging the hydraulic bypass and undermining the concrete slab and wing wall (portions of the former drydock structure). A Maintenance and Repair Permit (73437 NMR) was granted by OCRM to reconstruct the dam. A condition assessment revealed that replacing the existing structure "in kind" was not the best course of action for the long-term performance of the dam. The applicant's contractor prepared a design for a dam repair that was located landward of the existing dam and within the footprint of the original drydoock's concrete slab. During the course of construction unforeseen site conditions necessitated a change to the design. This occurred around the same time as the expiration of the Maintenance and Repair Permit. OCRM staff recommended to the applicant that they obtain a new permit for the dam and shoreline stabilization in Hobcaw Lake.

#### **Purpose and Need**

The purpose of the proposed dam reconstruction is to restore the structure that maintains appropriate water level and water quality within Hobcaw Lake. The purpose of the shoreline armoring is to prevent erosion and loss of significant trees as well as to improve water quality in Hobcaw Lake by minimizing sediment runoff caused by shoreline erosion.

#### Location

Hobcaw Lake is located adjacent to 338 Coinbow Drive in Mount Pleasant, Charleston County, South Carolina (see Sheet 1). The dam structure is located on the south shoreline of Hobcaw Creek approximately 0.4 miles form the confluence with the Wando River (Lat. 32° 53' 21" N, Lon. 79° 56' 09" W). To reach the facility from Charleston, head north on US Highway 17 over the Ravenel Bridge. After entering Mount Pleasant, turn left at the second stoplight onto Mathis Ferry Road. At the first roundabout, proceed north on Muirhead Road. Follow Muirhead Road for approximately 0.8 miles and turn right on Coinbow Drive. The Hernandez residence and the Hobcaw Lake dam are located at the terminus of Coinbow Drive.

#### **Project Dimensions and Impacts**

The existing dam was built at the entrance to an abandoned concrete drydock structure that dates from the 1950s (see Sheet 3 of the drawings for approximate limits of the footprint). Two concrete wing walls with cast-in-place channels held 10 x10 who is that functioned as a flashboard riser and allowed the water level in the Lake to be managed (the timbers had not been modified in many years).

The proposed dam replacement will consist of the following:

MAY 2 6 2015



OCRM-15-175-B

DHEC-OCRM CHARLESTON OFFIC Exhibit A page 2 of 2

 Approximately seventy-five (75) linear feet of vinyl sheet piling will be driven through a trench cut out from the concrete drydock slab as well as the adjacent dikes (top elevation: 3.0 MLLW, tip elevation: -9.0 MLLW) to block the hydraulic bypass.

- An earth dike will be constructed around and over the cantilevered sheetpile wall to provide lateral structural support (200 cy of clean fill material). The earthen dike will be covered with filter fabric and armored with a layer of #4 stone (15 cy of stone).
- A cast in place concrete slab will be poured over the stone to protect them from scour (20 cy of concrete).
- The concrete slab will be cast with a spillway that measures 10 ft x 28 ft with an elevation of 5.25 MLLW. This elevation is identical to the elevation of the old flashboard riser and will allow an exchange of water in the pond over most normal tidal cycles.
- The footprint of the dam fill occupies an area of approximately 1,000 sf; however, it should be noted that the majority of the fill lies within the footprint of the existing concrete drydock structure.
- Armoring approximately 200 linear feet of the shoreline in Hobcaw Lake with riprap (including the dam). This action will prevent additional loss of shoreline and the loss of several significant trees that are at risk from the current erosion. Around two of the trees, it will be necessary to reclaim approximately 5 feet of high ground to provide adequate support and protection to preserve the health of the trees (see attached letter from Nathan Dubosh, ISA Certified Arborist, S0-6652A). The shoreline protection will require approximately 225 cy of fill and 115 cy of riprap and will impact an area of approximately 2,500 sf.

As the impacts are temporary and minimal, no mitigation is proposed.

As a courtesy, the applicant has reviewed the proposed reconfiguration plans with the adjacent property owners along Hobcaw Lake.

A list of Adjacent Property Owners and their mailing addresses is provided as Exhibit B.

The completed and notarized Affidavit of Ownership or Control is provided as Exhibit C.

A statement the project is consistent with the SC Coastal Zone Management Program is provided as Exhibit D.

A copy of the letter from Nathan Dubosh, ISA Certified Arborist, S0-6652A is included as Exhibit E.

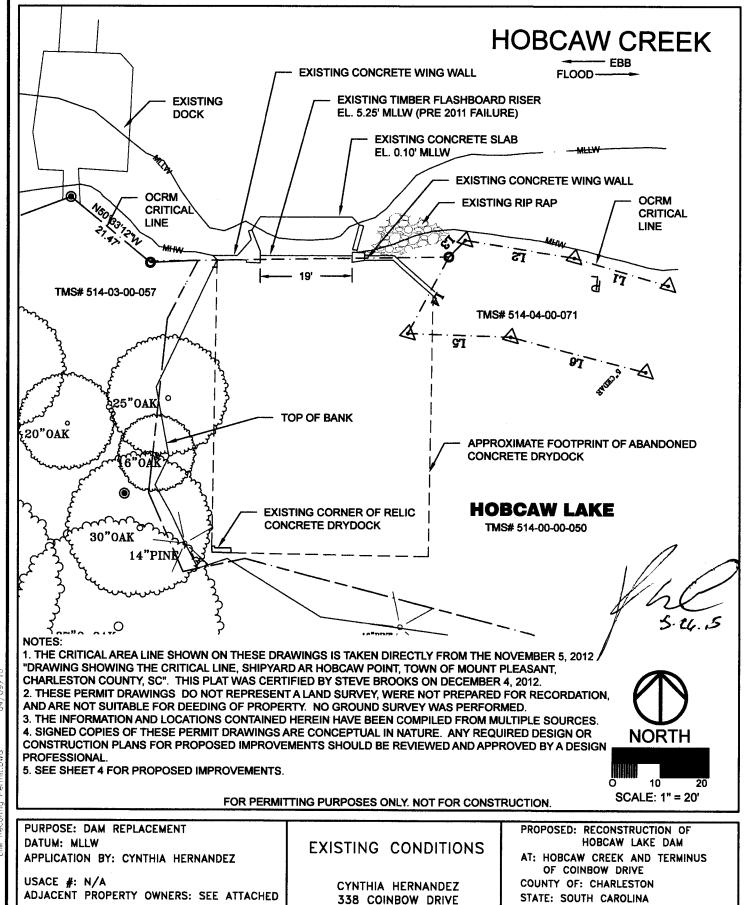
A copy of the Court Order appointing Charles Carmody as the Receiver is included as Exhibit F.

RECEIVED DHEC-OCRM CHARLESTON OFFIC



OCRM-15-175-B

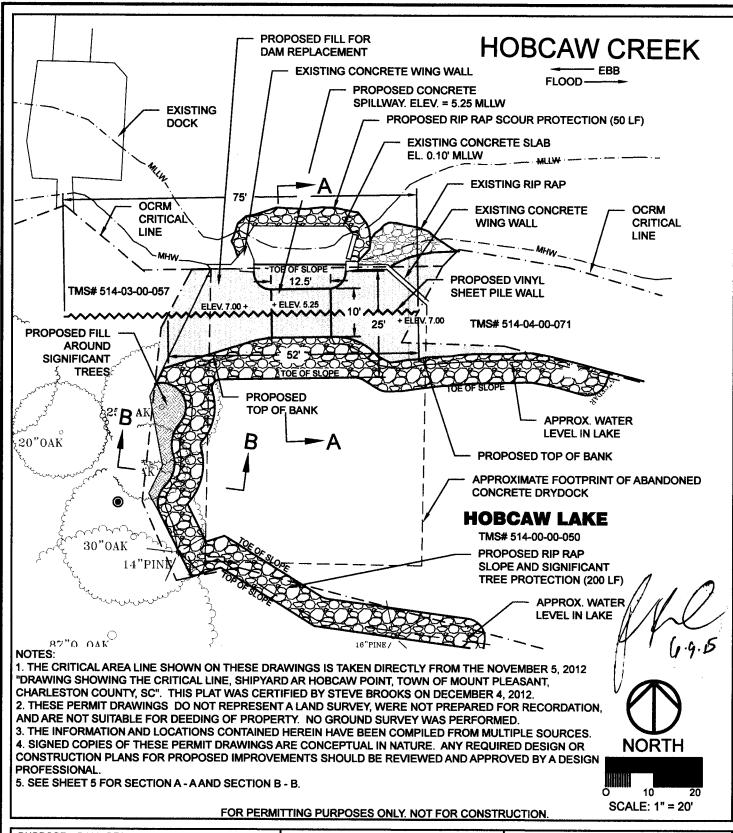
DATE: 5/5/15



SHEET 3

CHARLESTON, SC 29464





PURPOSE: DAM REPLACEMENT

DATUM: MLLW

APPLICATION BY: CYNTHIA HERNANDEZ

USACE #: N/A

ADJACENT PROPERTY OWNERS: SEE ATTACHED

DATE: 5/5/15

REV: 6/5/15

## PROPOSED IMPROVEMENTS

CYNTHIA HERNANDEZ 338 COINBOW DRIVE CHARLESTON, SC 29464 PROPOSED: RECONSTRUCTION OF HOBCAW LAKE DAM

AT: HOBCAW CREEK AND TERMINUS

OF COINBOW DRIVE COUNTY OF: CHARLESTON STATE: SOUTH CAROLINA

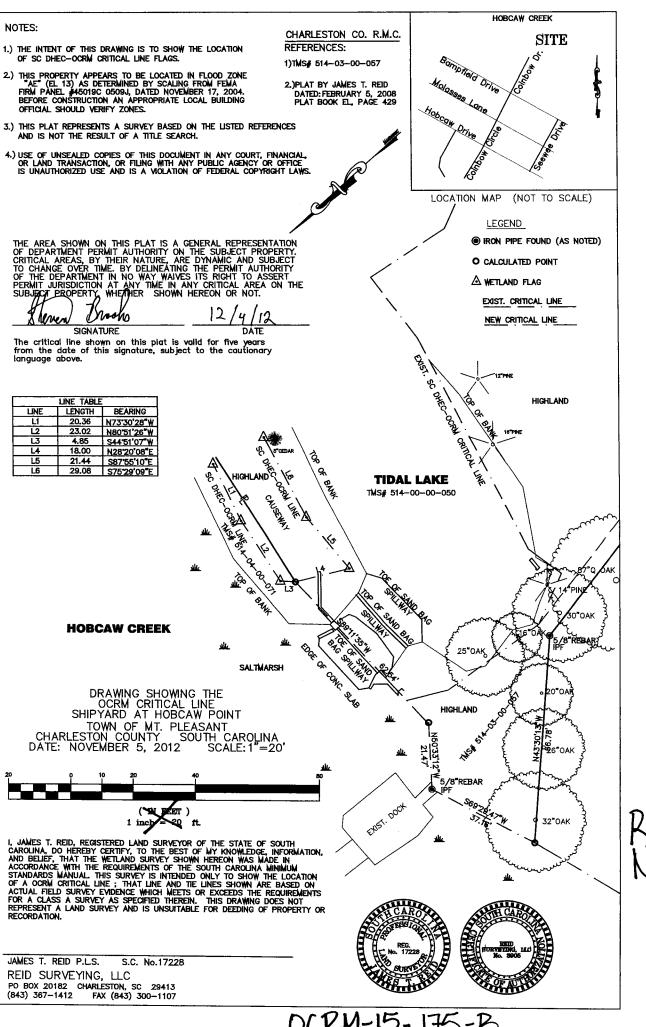
SHEET 4

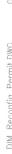
CRM-15-175-B

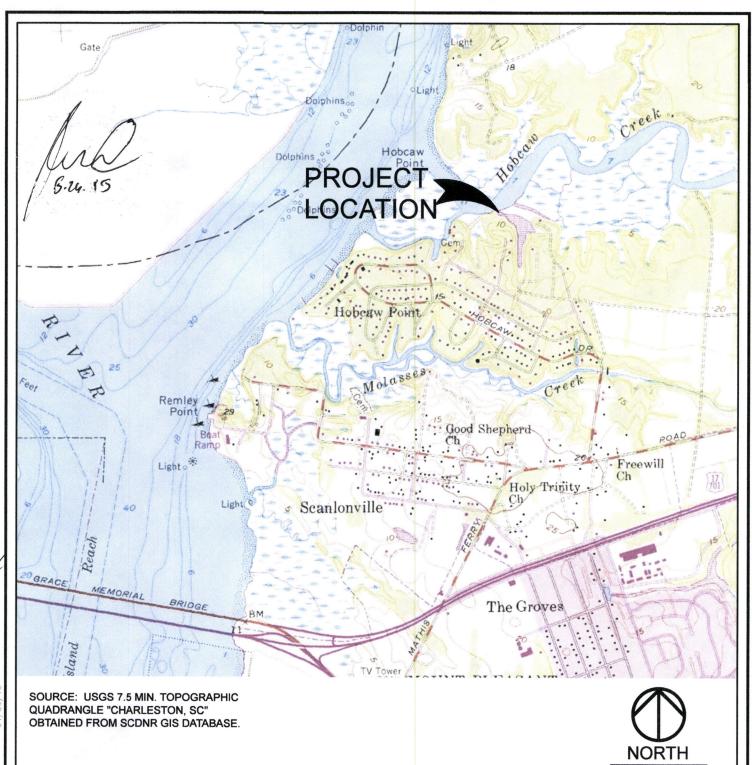
338 COINBOW DRIVE CHARLESTON, SC 29464

SHEET 5

5/5/15







PURPOSE: DAM REPLACEMENT

DATUM: MLLW

APPLICATION BY: CYNTHIA HERNANDEZ

USACE #: N/A

ADJACENT PROPERTY OWNERS: SEE ATTACHED

DATE: 5/5/15

LOCATION MAP

OCRM-15-175-B

FOR PERMITTING PURPOSES ONLY. NOT FOR CONSTRUCTION.

CYNTHIA HERNANDEZ 338 COINBOW DRIVE CHARLESTON, SC 29464 PROPOSED: RECONSTRUCTION OF HOBCAW LAKE DAM

AT: HOBCAW CREEK AND TERMINUS OF COINBOW DRIVE

COUNTY OF: CHARLESTON STATE: SOUTH CAROLINA

SHEET 1

1,000 2,000 SCALE: 1" = 2,000'